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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,241	01/22/2004	Hiroshi Wada	248071US0CONT	2022
22850	7590	07/13/2006		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER COONEY, JOHN M	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/761,241

Applicant(s)

WADA ET AL.

Examiner

John m. Cooney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21,26,27,29,31,32,34-36,38-40,43-45 and 47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21,26,27,29,31,32,34-36,38-40,43-45 and 47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/304,969.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0506.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

Applicant's arguments filed 4-10-06 have been fully considered but they are not persuasive.

Any rejection not set forth herein or maintained is hereby withdrawn:

### ***Specification***

The use of the trademark L-5421 has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 26, 27, 29, 31, 32, 34-36, 38-40, 43-45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeyasu et al.(5,093,380) in view of Kiamil et al.(5,164,421).

Takeyasu et al. discloses preparations of flexible polyurethane foams by mixing and reacting polyols of low-unsaturation and hydroxyl values as claimed which may also contain polymers dispersed within and are prepared using the double metal cyanide catalysts, modified crude MDI as claimed, catalysts, blowing agents, and silicone stabilizers as claimed (see the entire document).

While Takeyasu et al.'s disclosure may be directed towards closed mold operations, the reference is encompassing of combining and reacting the materials generally, and one would readily envision mixing and reacting the materials in an open state from the referenced teaching taken as a whole. Further, as being directed towards cushioning articles, straight slabstock foam cushions would be the most readily produced articles with shape/molded forms being produced according to design.

Additionally, Takeyasu et al.'s disclosure of prepolymer modified isocyanates is seen to readily envision the prepolymers of applicants' claims. Takeyasu et al. identifies modified crude MDI to be one of their preferred isocyanate functional materials with prepolymer modified products being one of these modifications mentioned (see column 5 lines 39-43). Based on the limited degree of picking in Takeyasu et al.'s teaching, anticipation is evident. Further, as reaction of the isocyanate with OH and to a lesser degree NH functional compound is what is meant by prepolymer modified products, anticipation of prepolymers based on OH functional compounds is evident.

Takeyasu et al.'s disclosure of silicon stabilizers is seen to be complete in its disclosure of the stabilizers as now claimed (column 5 lines 64-65, and column 7 lines 21-29). The specific stabilizers of Takeyasu et al. are of the same family of stabilizers

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generally and specifically and are seen to inherently possess Si contents of 10-50 mass % as is now claimed.

Takeyasu et al. discloses crosslinkers generally as is claimed and having molecular weights of less than 10,000 (see column 4 line 52 – column 5 line 26). Additionally, Takeyasu et al.'s disclosure of the employment of other polyols (column 3 lines 46-50) meet applicants' recitation of crosslinkers of MW's > 4000 as claimed.

The hardness ratios set forth in applicants' new claims are held to be inherent to the teachings of Takeyasu et al. since they are attributed to the make-ups of the products formed.

Takeyasu et al. differ from applicants' claims in that the monol modified prepolymers as claimed are not disclosed. However, Kaimil et al. disclose preparations of polyurethane foams using isocyanates prepared using prepolymeric modified polymeric isocyanates obtained through reaction with polyethylene glycol monomethyl ether for the purpose of capping excess reactive sites and economize product synthesis(see column 1, column 2 lines 5-12 & 61 et seq., and claims 4 and 28). Accordingly, it would have been obvious for one having ordinary skill in the art to have modified the isocyanates of Takeyasu et al. with polyethylene glycol monomethyl ether as taught by Kaimil et al. for the purpose of capping reactive cites in the isocyanate functional reactants employed in order to arrive at the process of applicants' claim with the expectation of success in the absence of a showing of new or unexpected results.

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Claims 21, 26, 27, 29, 31, 32, 34-36, 38-40, 43-45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP-1,022,300 A1 in view of Kiamil et al.(5,164,421).

EP-1,022,300 A1 discloses preparations of flexible polyurethane foams by mixing and reacting polyols of low-unsaturation and hydroxyl values as claimed which may also contain polymers dispersed within and are prepared using the double metal cyanide catalysts, modified crude MDI as claimed, catalysts, blowing agents, and silicone stabilizers as claimed (see the entire document).

EP-1,022,300 explicitly acknowledges that its procedures may be carried out by a method of spreading a reactive mixture into a mold in an open state (see again paragraph [0083]), and such a disclosure can not be ignored because the reference exemplifies closed molding applications.

Additionally, EP-1,022,300's disclosure of prepolymer modified isocyanates is seen to readily envision the prepolymers of applicants' claims [0077]. Takeyasu et al. identifies modified crude MDI to be one of their preferred isocyanate functional materials with prepolymer modified products being one of these modifications mentioned. Based on the limited degree of picking in EP-1,022,300's teaching, anticipation is evident. Further, as reaction of the isocyanate with OH and to a lesser degree NH functional compound is what is meant by prepolymer modified products, anticipation of prepolymers based on OH functional compounds is evident.

EP-1,022,300's disclosure of silicon stabilizers is seen to be complete in its disclosure of the stabilizers as now claimed ([0094] and Table 3). The specific

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stabilizers of EP-1,022,300 are seen to inherently possess Si contents of 10-50 mass % as is now claimed.

EP-1,022,300 discloses crosslinkers generally as is claimed and having molecular weights of less than 10,000 ([0075]). Additionally, EP-1,022,300's disclosure of the employment of other polyols ([0074]) meet applicants' recitation of crosslinkers of MW's > 4000 as claimed.

The hardness ratios set forth in applicants' new claims are held to be inherent to the teachings of EP-1,022,300 since they are attributed to the make-ups of the products formed.

EP-1,022,300 differs from applicants' claims in that the monol modified prepolymers as claimed are not disclosed. However, Kaimil et al. disclose preparations of polyurethane foams using isocyanates prepared using prepolymeric modified polymeric isocyanates obtained through reaction with polyethylene glycol monomethyl ether for the purpose of capping excess reactive sites and economize product synthesis(see column 1, column 2 lines 5-12 & 61 et seq., and claims 4 and 28). Accordingly, it would have been obvious for one having ordinary skill in the art to have modified the isocyanates of EP-1,022,300 with polyethylene glycol monomethyl ether as taught by Kaimil et al. for the purpose of capping reactive cites in the isocyanate functional reactants employed in order to arrive at the process of applicants' claim with the expectation of success in the absence of a showing of new or unexpected results.

Applicants' arguments have been considered, but rejections are maintained for the reasons set forth above. Applicants' showings of unexpected results have been considered, but new or unexpected results attributable to the differences indicated in the rejection that are commensurate in scope with the scope of the claims as they currently stand have not been demonstrated.

Regarding the molding limitations, in addition to the remarks set forth in the above rejections, it is maintained that although Takeyasu et al. may highlight a closed mold in one embodiment of their disclosure, its full disclosure readily envisions simple mixing in an open area, and such a limitation is not seen to be a distinction over what is fully taught by the teachings of Takeyasu et al. It is maintained that EP-1,022,300's disclosure of open mold techniques is sufficient anticipatory disclosure of this element of applicants' invention. The molding operations of the instant concern are addressed in the rejections above, and distinction in a patentable sense has not been identified by applicants' arguments. The stabilizers and crosslinkers of applicants' claims are not seen to be differences between applicants' claims and the teachings of the prior art for the reasons indicated in the rejections above, and applicants' arguments have not identified differences in the patentable sense which refute the positions set forth above. Whether the stabilizers of the instant concern are better suited to rigid or flexible foam applications does not negate the prior arts disclosure of the stabilizers meeting the criteria of applicants' claims. The crosslinkers of the claims are maintained to be met by the other polyols of the referenced teachings. Additionally, the crosslinkers of applicants' claims do not have the required elements discussed in applicants' reply.



### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 21, 26, 27, 29, 31, 32, 34-36, 38-40, 43-45, and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-41 of U.S. Patent No. 6,734,219 in view of Kiamil et al. and Takeyasu et al. U.S. Patent No. 6,734,219 discloses preparations of flexible polyurethane foams which are prepared by mixing and reacting polyols, PMDI, catalysts, and blowing agents. The claims of 6,734,219 differ from applicants' claims in that the monol modified prepolymers as claimed are not disclosed. However, Kaimil et al. disclose preparations of polyurethane foams using isocyanates prepared using prepolymeric modified polymeric isocyanates obtained through reaction with polyethylene glycol monomethyl ether for the purpose of capping excess reactive sites and economize product synthesis(see column 1, column 2 lines 5-12 & 61 et seq., and claims 4 and 28).

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Accordingly, it would have been obvious for one having ordinary skill in the art to have modified the isocyanates of the claims of 6,734,219 with polyethylene glycol monomethyl ether as taught by Kaimil et al. for the purpose of capping reactive sites in the isocyanate functional reactants employed in order to arrive at the process of applicants' claim with the expectation of success in the absence of a showing of new or unexpected results. The claims of 6,734,219 differ in that they do not specifically disclose other reactive hydroxyl functional materials in their claimed preparations meeting the crosslinkers of applicants' claims. However, Takeyasu et al. discloses crosslinkers generally as is claimed and having molecular weights of less than 10,000 (see column 4 line 52 – column 5 line 26) and employment of other polyols (column 3 lines 46-50) meeting applicants' recitation of crosslinkers of MW's > 4000 as claimed for purposes of providing isocyanate reactive functional groups for chain growth.

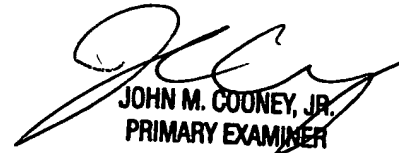
Accordingly, it would have been obvious for one having ordinary skill in the art to have modified the isocyanates of the claims of 6,734,219 with crosslinker and other polyol isocyanate reactive materials of Takeyasu et al. for the purpose of providing isocyanate reactive functional groups for chain growth in order to arrive at the process of applicants' claim with the expectation of success in the absence of a showing of new or unexpected results.

The above rejection is set forth as new in light of applicants' arguments and amendments to the claims, and it replaces the obviousness-type double patenting rejection set forth in the prior Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JOHN M. COONEY, JR.  
PRIMARY EXAMINER